

- Kagan, I. G. 1949. *Quickella* (family Succineidae) a new host for sporocysts of *Leucochloridium* (Trematoda: Brachylaemidae) in southeastern Michigan. Jour. Parasit. 35:38-39.
- Lee, C. B. 1951. The Molluscan family Succineidae in Michigan. Unpublished doctor's dissertation, Univ. Mich.
- Leonard, A. B. 1959. Handbook of gastropods in Kansas. Univ. Kas. Mus. Nat. Hist., Misc. Pub. 20:161-165.
- Miles, C. D. 1958. The family Succineidae (Gastropoda: Pulmonata) in Kansas. Univ. Kas. Sci. Bull. 38:1499-1543.
- Odhner, N. Hj. 1950. Succineid studies, genera and species of subfamily Catinellinae nov. Proc. Malac. Soc. Lond. 28:200-209.
- Pilsbry, H. A. 1948. Land Mollusca of North America (north of Mexico). Acad. Nat. Sci. Phila. Monogr. 3, vol. 2: (2) 521-1113 (see pp. 842-845).
- Webb, G. R. 1953a. Anatomical studies on some midwestern Succineidae and two new species. Jour. Tenn. Acad. Sci. 28:213-220.
- 1953b. Additions to the pulmonate snails of Oklahoma (with notes on anatomical techniques). Proc. Okla. Acad. Sci. 34:81-84.

A NEW CHLAMYS FROM THE SOUTH PACIFIC

By GILBERT GRAU

Early in 1959, Dr. Harald A. Rehder, of the United States National Museum, sent the author six lots of Pectinidae he had collected during 1957 in the Society Islands and the Tuamotu Archipelago. It was immediately apparent that the specimens comprising a lot taken at Bora Bora, Society Islands, represented a species either new to science or very rare and little-known. After a thorough search of the literature on Pectinidae in general and on the species native to the central and western Pacific in particular, followed by extensive comparisons with series of related species in his collection, the author concluded that this species had not previously been described. Its description follows.

CHLAMYS (ARGOPECTEN) REHDERI, sp. nova. Pl. 2, figs. 1-3

Shell small, largest known specimen (a right valve) 9.5 mm. in height and 9 in length, nearly equivalve and nearly orbicular; moderately inflated; hinge margin as long as disk or nearly; beaks produced a little beyond hinge margin. Right valve moderately convex; 18 to 23 rounded ribs on central portion of disk, with 4 or 5 riblets flanking each submargin; interspaces about same width as ribs; entire disk covered with fine concentric lamellae, usually worn off tops of ribs. Anterior auricle long, with

5 to 7 pronounced and distinctly imbricated riblets, moderately wide fasciole, fairly deep byssal sinus, and ctenolium of 6 teeth; posterior auricle long, with 6 to 8 low, rounded and moderately lamellose riblets. Left valve slightly deeper than right, but with ribbing and sculpture identical; auricles long, as in right valve, and each with 5 to 7 low, rounded and moderately lamellose riblets. Interior of each valve fluted as result of external ribbing; fluting extending, although becoming progressively weaker, up into umbonal region; reverse surfaces of external interspaces angulate; prominent cardinal crura flanking ligamental pit of right valve, with corresponding depressions in left valve. Coloration: right valve white, yellow-white or pink, irregularly maculate with brown or yellow-brown, and often with wavy streaks of white which are interrupted by interspaces; left valve more profusely colored, having streaks or blotches of yellow-brown, pale to deep brown, or red-brown.

Holotype: Height and length 8 mm.; hinge line 7 mm.; inflation 3.75 mm. U. S. National Museum, no. 612201. Type lot: USNM. 612202.

Type locality: Tereia Point, Bora Bora Island, Leeward Group, Society Islands, French Oceania. All specimens collected in 13-16 fathoms by Dr. H. A. Rehder, April 4, 1957.

The type lot, which comprises the only known specimens of this species, consists of two complete specimens, one the holotype and the other a small shell 4 mm. in height and length, along with 16 right valves and 19 left, the smallest valve 5.5 mm. in height and length and the largest 9.5 mm. in height and 9 in length. Judging by the holotype, quite probably this species attains a height of 12 to 15 mm., perhaps even a bit more, and the author is attempting to secure as much material as possible from the south central Pacific in the hope of finding additional specimens.

In general aspect, this species resembles very young specimens of *Chlamys* (*Argopecten*) *gibba* (Linné) or *C. (A.) purpurata* (Lamarck). Such specimens of *C. gibba*, however, have a considerably thicker shell, greater inflation, shorter posterior auricles, stronger cardinal crura, and the interior is fluted for only a short distance from the ventral margin; in *C. purpurata* the shell is slightly thicker, the ribs shallower, the riblets on the anterior auricle of the right valve fewer and stronger, the posterior auricles much shorter, and the intercostal lamellae both weaker and less numerous.

The only previously recorded species from Polynesia referable to *Argopecten* is *Pecten nux* Reeve. It differs from the present

species in being much more inflated and in having tripartite ribs, very short posterior auricles and profuse lamellar ornament.

Since *Argopecten* is represented in the central and western Pacific by only three known living species (*nux* Reeve, *pelseneeri* Dautzenberg & Bavay and *corymbiata* Hedley), two erroneous references in the literature to extra-limital species referable to that subgenus should be mentioned here. Dautzenberg & Bavay (1912, p. 19) cited ? *Pecten* (*Aequipecten*) *aequisulcatus* Carpenter, giving two locations: "Banda." [Moluccas, Indonesia] and "Saleh-bay." [Soembawa (or Sumbawa) Island, Lesser Sunda Islands, Indonesia]; Bavay commented that he was reporting the species with some doubt. Campbell (1923, p. 40) cited *Pecten circularis* Sowerby from "Near Canton, and at Chung Chow, Hong Kong Territory, China." Obviously neither Bavay's nor Campbell's shells could have been examples of the eastern Pacific species they cited. Bavay's four specimens were all very young shells and found in 9 to 45 meters depth, indicating at least a small possibility that they may have been referable to this new species. Campbell's shells were very likely specimens of *pelseneeri* Dautzenberg & Bavay (1912, p. 8; new name for *Pecten rugosus* Sowerby, 1842, *non Pecten rugosus* Lamarck, 1819); *Chlamys* (*Argopecten*) *pelseneeri* (Dautzenberg & Bavay) has been reported from Japan, the Philippine Islands, Indonesia and Thailand (from the latter as *Pecten rugosus* Sowerby, by Lynge, 1907, p. 154).

Pectinidae of the group exemplified by such well-known species as *Ostrea gibba* Linné and *Pecten circularis* Sowerby have often been referred to *Plagioctenium* Dall or *Aequipecten* E. A. Fischer. The former is a junior synonym of *Argopecten* Monterosato; the latter comprises a few species distinct from *Argopecten* in being more orbicular, less inflated, and having radial striae. In addition to the type species, *C. commutata* (Monterosato) and the species here described, the following are also referable to *Argopecten*: *C. circularis* (Sowerby), *circularis aequisulcata* (Carpenter), *corymbiata* (Hedley), *flabella* (Gmelin), *flabella schrammi* (Fischer), *gibba* (Linné), *gibba nuclea* (Born), *gibba portusregii* (Grau), *irradians* (Lamarck), *irradians amplicostata* (Dall), *irradians concentrica* (Say), *noronhense* (E. A. Smith), *nux* (Reeve), *pelseneeri* (Dautzenberg & Bavay) and *purpurata* (Lamarck). A thorough discussion of *Argopecten*, its type species, synonymy and distribution will be found in the present author's

recently published monograph (Grau, 1959, pp. 93-96).

LITERATURE CITED

- Campbell, A. S. 1923. Some common Chinese Mollusca. Jour. Entomol. Zool. (Pomona College, Calif.) 15, pp. 37-41.
- Dautzenberg Philippe, and Arthur Bavay. 1912. Les lamellibranches de l'Expédition du Siboga. Partie Systematique. I. Pectinidés. In Siboga-Expeditie. Leiden. Mon. 53b, 41 pp., pls. 27-28.
- Grau, Gilbert. 1959. Pectinidae of the eastern Pacific. Allan Hancock Pacific Expeditions (Univ. S. Calif. Press, Los Angeles), vol. 23 (complete), pp. i-viii, 1-308, 57 pls.
- Lyngé, Herman. 1909. The Danish Expedition to Siam, 1899-1900. Marine Lamellibranchiata. Mem. Acad. Roy. Sci. Lett. Danemark, ser. 7, vol. 5, no. 3. pp. 99-299, 5 pls., 1 chart.

PLEISTOCENE MOLLUSCAN NOTES, 3. ROCKY COAST FAUNULE, BAHIA SAN QUINTIN, MEXICO

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Numerous molluscan fossils have been recorded from the Upper Pleistocene of Bahía San Quintín, Baja California, Mexico, but the precise associations and abundances of species there have not yet been described. During a trip to gather data for the classic eastern bay shore localities, a small Upper Pleistocene fossil assemblage was collected from the western side as well (U.C.L.A. Locality 4186). Although it consists of only 31 molluscan forms, this faunule is of special interest as it contains a relatively large protected rocky-coast association. The fossil locality lies eastward of Kenton Hill and on the northern side of Mount Cenizia (both volcanic cones) and was situated on the leeward side of a volcanic island during the Late Pleistocene time. The fossiliferous sediment is a rubble of angular volcanic cobbles and boulders with a poorly-sorted matrix that is chiefly an angular quartz-poor silt with minor amounts of fine angular sand and of clay, and contains abundant shell fragments and scattered shells. Evidently the steep volcanic slopes supplied both coarse and fine debris, while fine sediment was probably also transported alongshore by marine agencies. The sediment appears to be buttressed against ancient lava flows, but contacts are obscured by alluvial cover.

Previous and present work. Most of the Pleistocene fossils recorded from the Bahía San Quintín region were collected by C. R. Orcutt and G. D. Hanna. Orcutt's collecting began in the last cen-